



ENERGY & RESOURCES

Flowback Aids

Optimizing Flow, Maximizing Results.



INDORAMA
VENTURES

Indispensable Chemistry



FLOWBACK AIDS SURFACTANTS

Indovina's Flowback Aids surfactants offer improved performance in oil recovery by reducing interfacial tension and emulsion formation, ensuring more efficient hydrocarbon production.

The combination of a portfolio featuring products with different fatty chains, varying degrees of ethoxylation, HLB, surface tension, and CMC ensures active ingredients suitable for a wide range of formulations and field conditions.



Product	Chemical Description	Active Content (wt%)	HLB	Cloud Point (°F)	Surface Tension ^d (mN/m)	CMC (g/L @77 °F)
NONIONIC INTERMEDIATE						
ALKOMOL® L 306	Lauryl Alcohol Alkoxylate	> 99	5.5	79 ^a	31.4	0.005
ALKOMOL® L 405	Lauryl Alcohol Alkoxylate	> 99	7.0	91 ^a	31.3	0.026
ALKOMOL® L 603	Lauryl Alcohol Alkoxylate	> 99	9.3	100 ^b	31.2	0.028
ALKONAT® L 50 / SURFONIC® L24-5	Lauryl Alcohol Ethoxylate	> 99	10.8	157 ^a	28.2	0.021
ALKONAT® L 70 / SURFONIC® L24-7	Lauryl Alcohol Ethoxylate	> 99	12.4	131 ^b	28.9	0.040
ALKOSYNT® 9160	C9-11 Alcohol Ethoxylate	> 99	12.5	126 ^b	28.1	0.392
ALKOSYNT® ID 60	Isodecyl Alcohol Ethoxylate	> 99	12.5	108 ^b	26.5	0.773
ALKOSYNT® IT 90	Isotridecyl Alcohol Ethoxylate	> 99	13.4	144 ^b	27.4	0.060
ULTRAMINA® TA 120	Tallow Fatty Amine Ethoxylate	> 98	13.3	150 ^c	36.8	0.057

Additionally, Indovina offers formulated solutions that integrates surfactants, solvents, and co-surfactants, providing a ready-to-use product for enhanced performance.

SPECIALTY						
ULTRAFRAC® FB G10	Formulated	> 31	16.3	> 185 ^b	27.2	0.100
ULTRAFRAC® FS P10	Formulated	> 80	12.0	61 ^a	32.0	0.251

^a1 wt% in 25:75 DGBE:Water | ^b1 wt% in water | ^c1 wt% in NaCl brine with 10,000 ppm | ^d0.1 wt% in water

ULTRAFRAC® FB G10

Advanced Chemistry for Superior Flow

ULTRAFRAC® FB G10 is a ready-to-use specialty formulation that enhances formation permeability and significantly reduces flowback time, maximizing well productivity and operational efficiency. Additionally, its advanced formulation reduces interfacial tension and emulsion formation, accelerating phase separation for more efficient hydrocarbon production.

FEATURES



Capillary Pressure Reduction

Improves fluid recovery and reduces water blocks.



Increased Permeability

Contributes to maintaining formation permeability and well productivity.

BENEFITS



Efficient Fluid Recovery

Facilitates rapid recovery of treatment fluids and hydrocarbons.



Operational Efficiency

Enhances the separation of oil from water, reducing operational time and costs.

Fluid Recovery Tests

Fluid recovery and oil permeability tests evaluate the effectiveness of flowback surfactants by assessing their ability to improve fluid recovery after hydraulic fracturing. These products reduce water-induced blockages by altering the wettability of rocks and reducing the pressure capillarity resulting in an increased fluid recovery.



6x increase in
fluid recovery



300 minutes decrease
in breakthrough time
(vs. blank test)



Enhanced **recovery**
in shorter periods



Prevents
emulsion formation

* 7 wt% KCl brine

** 7 wt% KCl brine with 200 ppm



DISCLAIMER

This information is provided in good faith, based on Indorama Ventures' current knowledge of the subject and is purely indicative. No information, including suggestions for using the products, should preclude experimental testing and verification, which are essential to ensuring the suitability of the products for each specific application. Consult the contact from your region or country regarding the availability of each product. All users must also respect local laws and obtain all the necessary permits. When handling the product, consult the safety data sheet. If you have any questions or additional needs, please contact Indorama Ventures through our customer service channels.

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